

WHAT IS CLAIMED IS:

*JULY 16 1981*

1. An imaging member comprising  
a supporting substrate,  
an optional hole blocking layer,  
an optional adhesive layer,  
a charge transport layer,  
a charge generating layer,  
an optional charge trapping layer,  
a cross linked silicone rubber, and  
a resilient, electrically insulating overcoating layer.
2. An imaging member comprising  
a supporting substrate,  
a charge transport layer,  
a charge generating layer,  
a cross linked silicone rubber, and  
a resilient, electrically insulating overcoating layer.
3. An imaging member according to claim 1 wherein the  
supporting substrate contains a charge injecting surface.
4. An imaging member according to claim 1 wherein the  
charge injecting surface comprises graphite, gold, or carbon.
5. An imaging member according to claim 1 wherein the  
charge injecting surface is carbon.

6. An imaging member according to **claim 1** wherein the substrate is of a thickness of from about 75 micrometers to from about 275 micrometers and wherein the substrate is flexible, seamless, or rigid.

7. An imaging member according to **claim 1** wherein the substrate can be of different configurations, comprising a plate, a cylindrical drum, a scroll, or an endless flexible belt.

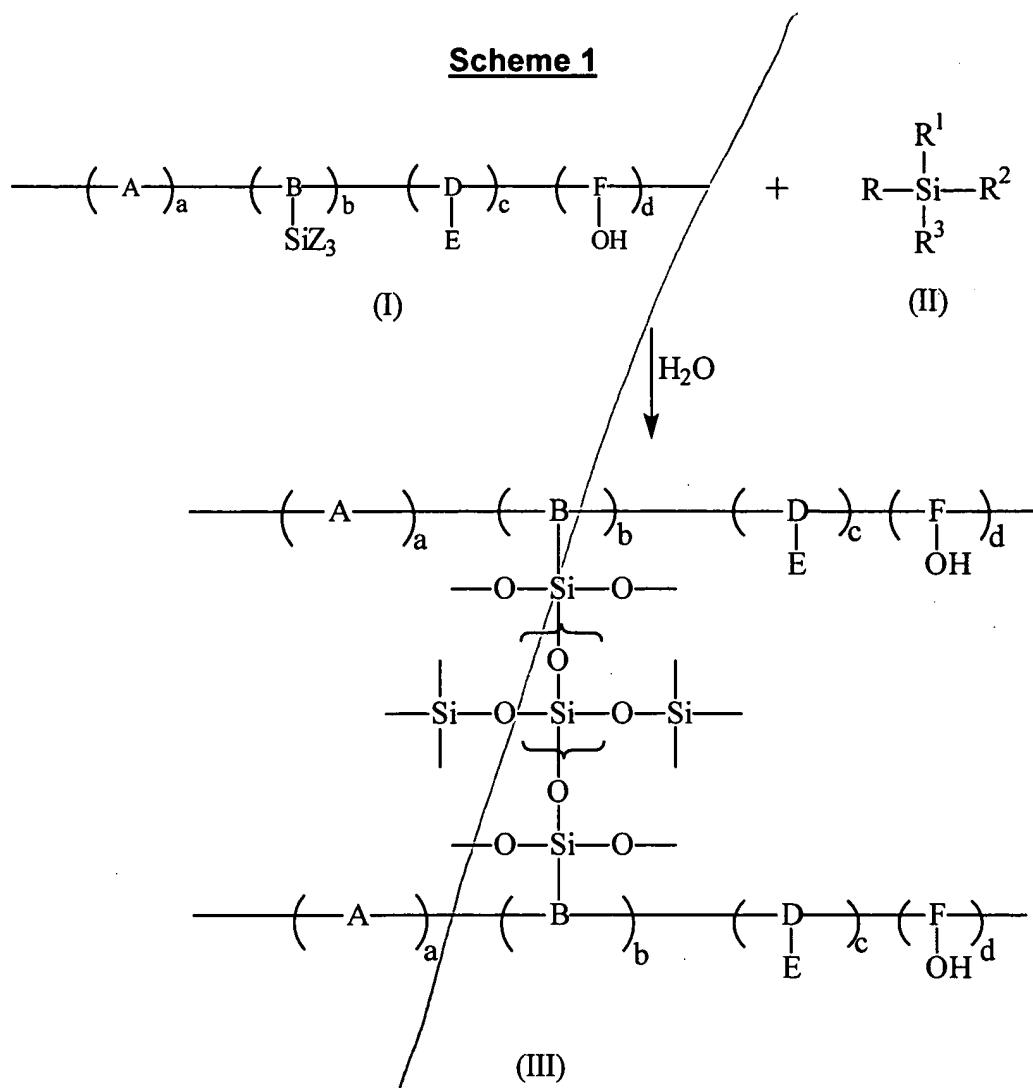
8. An imaging member according to **claim 1** wherein the hole blocking layer is present and is continuous and is of a thickness of from about 0.001 micrometers to about 5 micrometers.

9. An imaging member according to **claim 8** wherein the hole blocking layer is present and is continuous and is of a thickness of from about 0.005 micrometers to about 0.3 micrometers.

10. An imaging member according to **claim 1** wherein the hole blocking layer is present and contains a crosslinked polysiloxane polymer network impregnated with a hydroxy-functionalized polymer and photogenerating pigments.

11. An imaging member according to **claim 1** wherein the hole blocking layer is present and is comprised of a crosslinked polymer (III) derived from the reaction of polymer (I) and an organosilane represented by formula (II) which is derived from the crosslinking reaction as described in Scheme 1

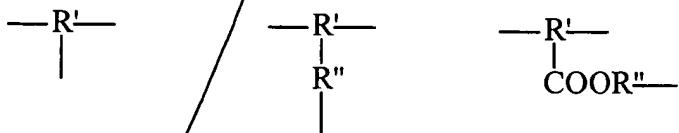
Scheme 1



wherein E is an electron transport moiety; A, B, D and F represent the segments of the polymer backbone containing appropriate divalent linkages, which connect or bond the silyl function ( $\text{SiZ}_3$ ), the electron transport moiety (E), and the hydroxy function (OH) to the polymer backbone; Z is selected from the group consisting of chloride, bromide, iodide, cyano, alkoxy, for example, of from about 1 to about 5 carbon atoms, acyloxy of, for example, from about 2 to about 6 carbon atoms, aryloxy of, for example, from about 6 to about 10 carbon atoms; a, b, c, and d are mole fractions of the repeating monomer units wherein  $a+b+c+d$  is equal to about 1; R is alkyl, substituted

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alkyl, aryl, or substituted aryl, with the substituent being halogen, alkoxy, aryloxy, amino, and the like; and R<sup>1</sup>, R<sup>2</sup>, and R<sup>3</sup> are independently selected from the group consisting of alkyl, aryl, alkoxy, aryloxy, acyloxy, halide, cyano, and amino provided that two of R<sup>1</sup>, R<sup>2</sup>, and R<sup>3</sup> are independently selected from the group consisting of alkoxy, aryloxy, acyloxy, and halogen; a photoconductive imaging member wherein a is from about 0 to about 0.95, b is from about 0.001 to about 0.50, c is from about 0 to about 0.50, and d is from about 0.01 to about 0.95; a photoconductive imaging member wherein A is selected from the group of divalent linkages, such as alkylene, arylene, alkoxycarbonylalkylene, alkoxycarbonylarylene, and the like; B, D and F are independently selected from the group consisting of, for example,

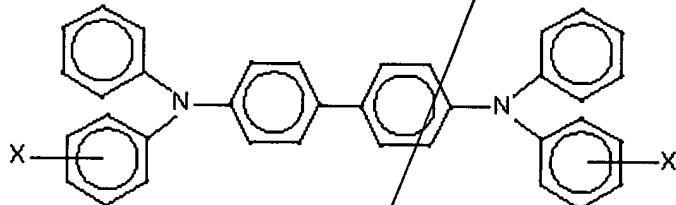


wherein R' and R'' are independently trivalent linkages or divalent linkages of from about 2 to about 24 carbon atoms.

12. An imaging member according to **claim 1** wherein the adhesive layer is present and is of a thickness of from about 0.001 micrometers and about 0.2 micrometers.

13. An imaging member according to **claim 1** wherein the charge transport layer is present and contains aryl amine molecules.

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14. An imaging member according to claim 13 wherein the charge transport layer is present and contains aryl amines of the formula



wherein X is selected from the group consisting of alkyl and halogen, and wherein the aryl amine is dispersed in a highly insulating and transparent resinous binder.

15. An imaging member according to claim 1 wherein the charge transport layer is present and contains from about 1 to about 12 carbon atoms.

16. An imaging member according to claim 1 wherein the charge transport layer is present and contains from about 1 to about 5 carbon atoms and is of a thickness of from about 10 micrometers to about 75 micrometers.

17. An imaging member according to claim 1 wherein the charge transport layer contains a charge transporting polymer.

18. An imaging member according to claim 17 wherein the charge transporting polymer is polyethercarbonate (PEC).

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19. An imaging member according to **claim 15** wherein the charge transporting polymer is polysebacoyl-TBD (PSEB).

20. An imaging member according to **claim 1** wherein the charge generating layer contains photoconductive particles of hydroxygallium phthalocyanine and wherein said photoconductive particles are dispersed in a film forming binder.

21. An imaging member according to **claim 1** wherein the charge generating layer is of a thickness of from about 0.2 micrometers to about 0.7 micrometers.

22. An imaging member according to **claim 1** wherein the charge trapping layer is of a thickness of from about 20 Angstroms to about 10 microns and comprises polyvinylbutyral, organosilanes, epoxy resins, polyesters, polyamides, polyurethanes, silicones, or polysiloxane.

23. An imaging member according to **claim 1** wherein the charge trapping layer is of a thickness of from about 20 Angstroms to about 2 microns.

24. An imaging member according to **claim 1** wherein the cross-linked silicone rubber prior to cross linking is dimethyl polysiloxane hydrolyzate.

25. An imaging member according to **claim 1** wherein the overcoating layer is of a thickness from about 5 micrometers to about 10 micrometers.

26. An imaging member according to **claim 1** wherein the overcoating layer is substantially transparent to activating radiation and electrically insulating.

27. A process comprising  
providing an imaging member comprising  
    a supporting substrate with a charge injecting surface,  
    an optional hole blocking layer,  
    an optional adhesive layer,  
    a charge transport layer,  
    a charge generating layer,  
    an optional charge trapping layer,  
    a cross linked silicone rubber, and  
    a resilient, electrically insulating overcoating layer, the overcoating layer having an exposed imaging surface,  
    forming a uniform charge of a first polarity on the imaging surface,  
    supplying charges of a second polarity to the charge injecting surface whereby the charges of a second polarity are injected into the transport layer and migrate to the overcoat layer,  
    supplying a charge of a second polarity to the imaging surface to neutralize the charge of the first polarity on the imaging surface,  
    exposing the imaging surface to activating radiation in image configuration to form an electrostatic latent image,  
    developing the electrostatic latent image with marking particles to form a marking particle image corresponding to the latent image, and optionally transferring the marking particle image to a receiving member.